

Quantum Disinfection™



SIMPLIWATER
Discover the Difference...

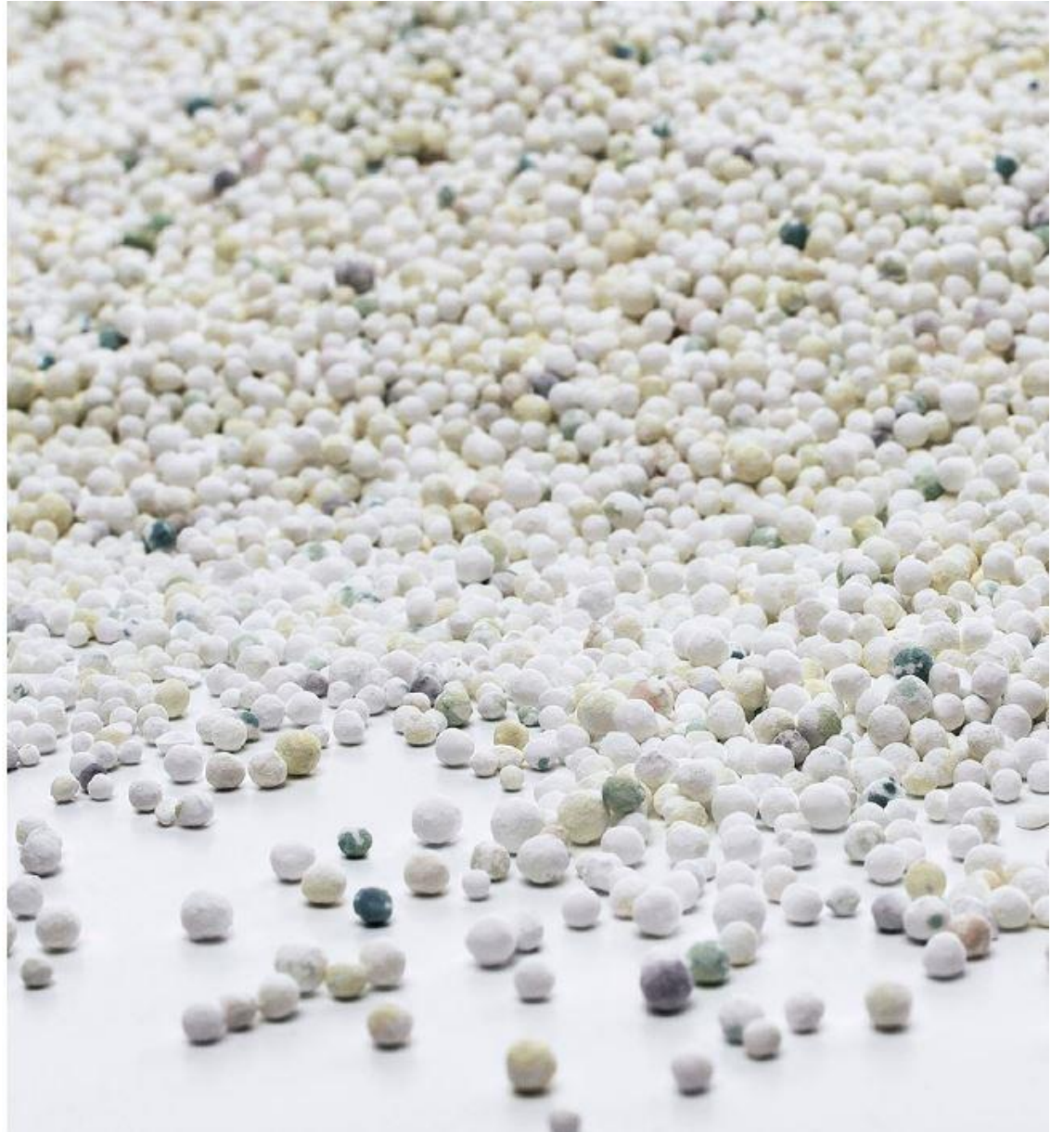




Quantum Disinfection™

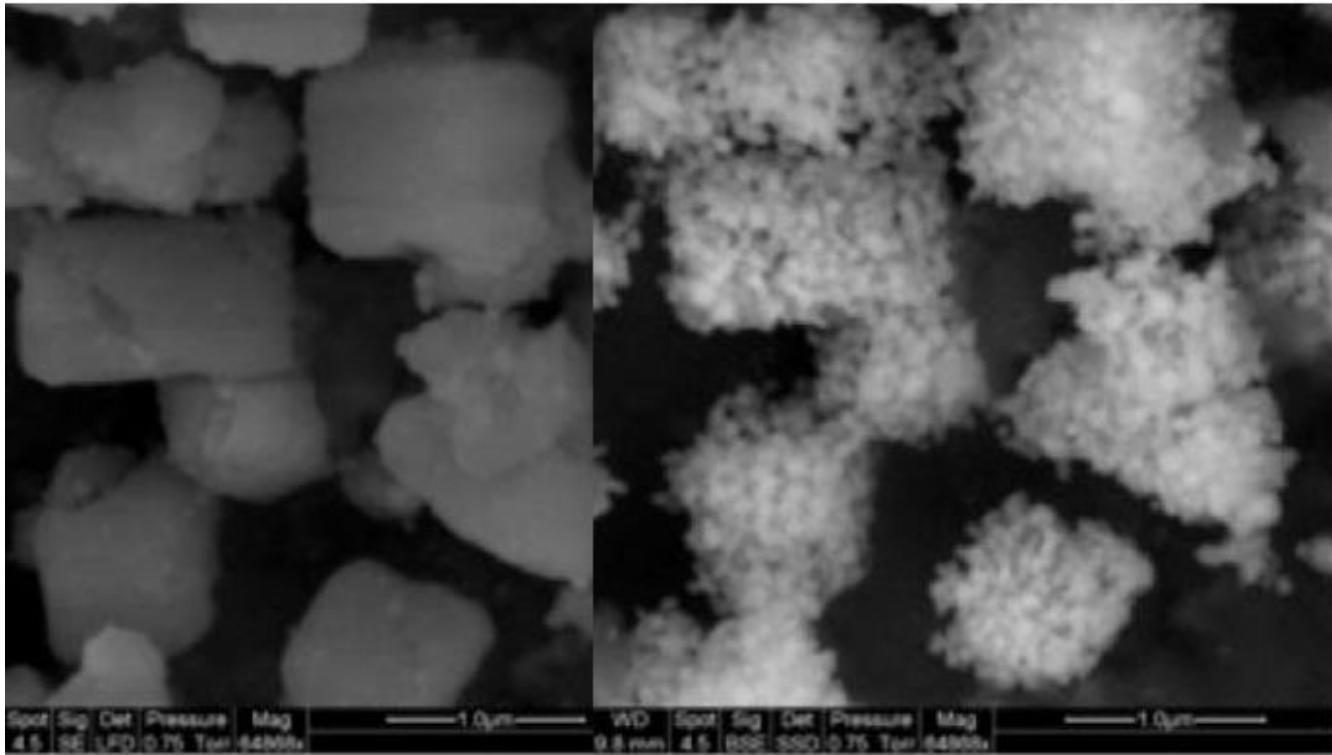
No power. No chemicals. No maintenance.

Claire Technologies is the inventor and manufacturer of Quantum Disinfection™ technology: a revolutionary new process that uses surface catalytic action to instantly disinfect water by attracting electrons. Before now, to disinfect water, users had to plug in a device or introduce a chemical into the water. Quantum Disinfection™ does away with all of that. Water simply has to pass over the media and the bacteria are instantly destroyed through a catalytic electron exchange.



CATALYTIC SURFACE - ELECTRON ATTRACTION

Quantum Disinfection™ works by attracting electrons from microorganisms. This electron attraction is achieved through a patented technology and manufactured in Raleigh, NC.



① ACTIVATED SURFACES

The technology works by using a chemical vapor deposition process onto a ceramic substrate. This deposition creates Catalytic Towers on the ceramic surface.

② CATALYTIC PRINCIPLES

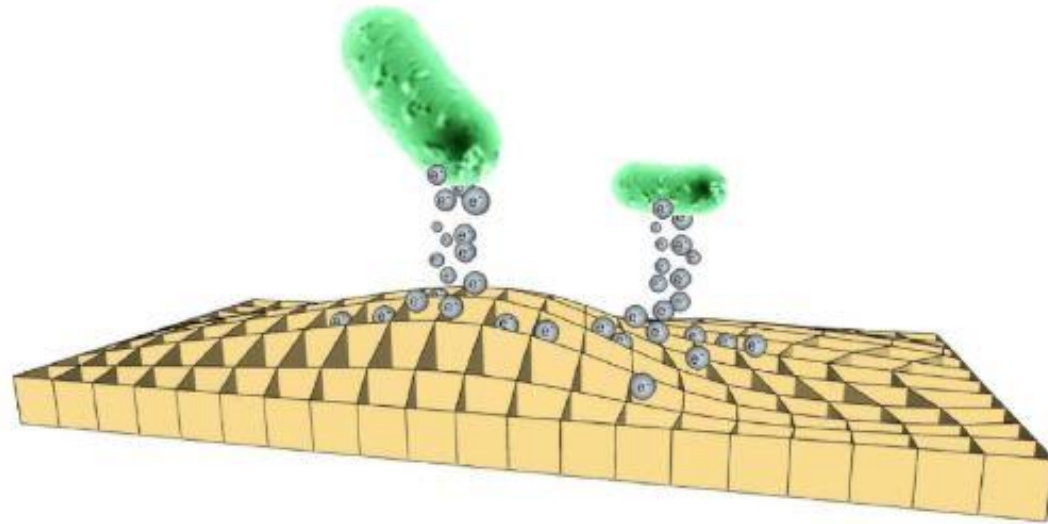
Quantum Disinfection™ uses many of the same electron movement principles found in smartphones and computers to influence electron movement.

③ DIFFERENTIAL CHARGES

The differential charges on these Catalytic Towers were measured at 367.9 and 365.8 eV.

how does it work?

Disinfection media behaves as it sounds. Resembling grains of sand, the Silecte™ and Seramate™ disinfection lines of media work by using a densely charged surface to attract electrons. In short, pathogenic microbial electrons are attracted to the disinfection media surface and the microbes instantly explode on the molecular level upon contact.



Claims Backed By Testing

Quantum Disinfection™ started at the EPA, with a Cooperative Research and Development Agreement (CRADA). The technology is patented in the United States and China, and an earlier version of the technology is patented in Europe, the United States and China.



EPA CRADA #865-15

Claire entered into an EPA CRADA on August 18th, 2015 for Emergency Drinking Water. It remains ongoing.



NSF CERTIFICATION

Quantum Disinfection™ was NSF 42 component certified on August 15th, 2016



CHINA M.O.H.

Quantum Disinfection™ was certified by the China Ministry of Health as safe for drinking in March of 2017.



PATENT GRANTED

Claire Technologies was informed that all claims on their Quantum Disinfection™ patent would be granted and issued before June 2017.

Quantum Disinfection™

Test Results and Certifications



RIGOROUS TESTING. EXCEPTIONAL RESULTS.

Quantum Disinfection™ has undergone over 8 years of testing by the world's premiere laboratories, including the EPA, Department of Homeland Security, China MOH, Eurofins, Proteus and NCDENR.

Microorganism (MO)	MO type	Best germicide efficiency (log reduction)	Certified Laboratory
<i>Pseudomonas aeruginosa</i>	bacteria	log 7	PIL, Proteus
<i>Escherichia coli</i>		log 7	EPA, PIL, Microbac, Proteus, Ackurilabs, GDCM, BFML
<i>Staphylococcus aureus</i>		log 7	PIL, Proteus, BFML
<i>Enterococcus hirae</i>		log 10	Ackurilabs, PIL, Proteus
<i>Legionella adelaidensis</i>		log 6	Proteus
<i>Citrobacter sp</i>		log 5	PIL
<i>Candida albicans</i>	yeast	log 5	Proteus
<i>Anabaena constricta</i>	algae	log 5	Proteus

Water Quality Association
International Headquarters and Laboratory
4151 Naperville Road Lisle, IL 60532



Quality Filter Testing, LLC
41D Germay Drive, Wilmington, DE 19804

Is recognized by the Water Quality Association Laboratory as an approved Testing Laboratory. WQA agrees to accept the results prepared by the Laboratory in accordance with the policies and procedures agreed to by the laboratory in the Technical Service Provider Application and Agreement Evaluation. The Laboratory has satisfactorily demonstrated its compliance to ISO/IEC 17025, and has been verified as capable of performing the following tests:

NSF/ANSI 42

Drinking Water Treatment Units – Aesthetic Effects
Chlorine Reduction – Section 7.3

NSF/ANSI 53

Drinking Water Treatment Units – Health Effects
VOC Reduction – Section 7.2.5
Metals Reduction Testing – Section 7.4





QFT LABORATORY, LLC

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EPA ID # DE00946 NJ DEP ID # DE009 IAPMO ID #102

WATER FILTER REDUCTION TEST REPORT

Report # 18-155
Report Date: 06/01/2018
Customer Name: Claire Tech
Flow Rate: 10 gallons per minute.
Filter Volume: 100 gallons
Filter Model: Clarify¹²

Contaminant Tested	Influent Water	Effluent 100 gallons	% Reduction
E. coli (Colony Forming Unit)	128,000,000 CFU/L	1400 CFU/L	99.9989%
MS2 Phage Virus (Plaque Forming Unit)	5,200,000 PFU/L	2 PFU/L	>99.9999%
Silver EPA 200.8	<1 µg/L	101 µg/L	---

CERTIFICATION OF RESULTS:

I certify in writing that all analyses, and reporting performed herein, comply with all requirements set forth in N.J.A.C. 7:9E and N.J.A.C. 7:18, and hereby certify that this laboratory is in compliance with all laboratory certification and quality control procedures and requirements as set forth in N.J.A.C. 7:18; the NYCRR Subpart 55-2, the National Environmental Laboratory Accreditation Conference (NELAC) Institute Standards, the ISO 17025, and the Water Quality Association (WQA).

Disclaimer: The test results are only related to the filter cartridges tested, in the condition received at the laboratory.

Jaime Young

Jaime Young
Lab Director

Pathogen Performance

Quantum Disinfection™ Germicidal activity tested by certified laboratories

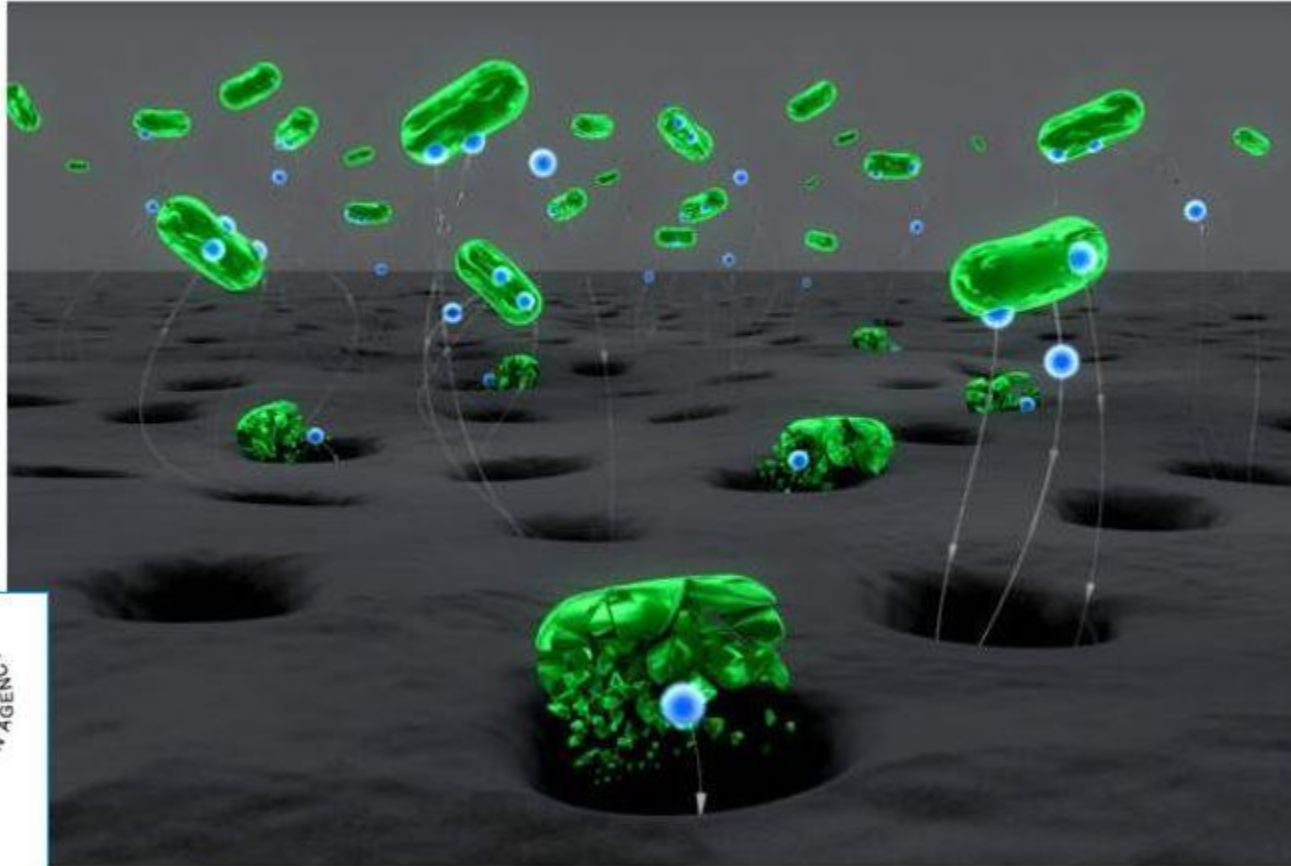
According to the BS EN 1276 Antiseptic and Disinfectant Standards, Quantum Disinfection™ "is considered as a disinfectant any product that has the ability to reduce by 10E+5 (5 log) the number of viable bacterial cells belonging to referenced strains of Pseudomonas aeruginosa, Escherichia coli, Staphylococcus aureus and Enterococcus hirae" (Art. 3.3-Bactericidal Activity, page 6).

Several institutions such as Environmental Protection Agency (EPA - USA), Pastor Institute of Lille (PIL - France), Microbac (USA), Proteus (France), Ackuritlabs (USA), Guangdong Detection Center of Microbiology (GDCM - China) and The Byrraju Foundation Microbiological Laboratory (BFML - India) tested Quantum Disinfection™ media according to the BS EN 1276 Standards and our applications.

Micro-organism (MO)	MO Type	Best germicide efficiency (log reduction)	Certified Laboratory
Pseudomonas aeruginosa	Bacteria	Log 7	PIL, Proteus
Escherichia coli		Log 7	EPA, PIL, Microbac, Proteus, Ackuritlabs, GDCM, BFML
Staphylococcus aureus		Log 7	PIL, Proteus, BFML
Eterococcus hirae		Log 10	Ackuritlabs, PIL, Proteus
Legionella adelaidensis		Log 6	Proteus
Citrobacter sp		Log 5	PIL
Candida albicans	Yeast	Log 5	Proteus
Anabaena constricta	Algae	Log 5	Proteus

How it Works

The Destruction of bacteria and other pathogens occurs when the live cell is broken apart by the “passive electrical action” of the QD media.



Quantum
Disinfection™ is EPA
listed under CRADA No.
865-15